

## Special Issue

# Progresses and Gaps on Monitoring of Snow and Its Components at the Local, Regional to Global Scale and Its Applications

### Message from the Guest Editors

Snow plays an essential role in the climatic and environmental challenges of the 21st century. The snow cover represents a key source of global water resources and climate regulation, and has shown high sensitivity to the warming climate. The quantity and quality of collected snow information is also constantly increasing with the possible novel automated methods provided by recent technological development for cheaper and easier monitoring. During the last several decades, instrumentation and measurement techniques have advanced quickly, providing a significant amount of new information about the extent and properties of snow. The forecasting of snow-related hazards in Europe is mostly performed at the country or regional level, and heavily relies on the concurrent meteorological factors and snowpack properties, which are usually acquired from point measurements or physical models. A big challenge is bridging information from microstructural scales of the snowpack up to the grid resolution in models, and then to provide knowledge-based information on potential impacts to society, economy, and safety.

### Guest Editors

Dr. Ali Nadir Arslan

Prof. Dr. Carlo De Michele

Dr. Bartłomiej Luks

Prof. Dr. Aynur Sensoy

Dr. Leena Leppänen

### Deadline for manuscript submissions

closed (31 October 2023)



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*Geosciences*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[geosciences@mdpi.com](mailto:geosciences@mdpi.com)

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### Message from the Editor-in-Chief

Understanding the Earth's origin and its bio-geological evolution, the multiple implications of the geosciences (as a coherent set of interconnected disciplines), and the sociocultural and ethical interdisciplinary approaches, will be crucial for a better understanding of Nature, and also for undertaking scientifically based political decisions.

We are committed to drive *Geosciences* to a position in which it is recognized for its high-quality, cutting-edge research and scientific influence, and strongly encourage and invite your participation and manuscripts.

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### Editor-in-Chief

Prof. Dr. Alberto G. Fairén

1. Centro de Astrobiología, CSIC-INTA, Madrid, Spain
2. Department of Astronomy, Cornell University, Ithaca, NY, USA

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